

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) ~~A case for an electrically powered device comprising:~~
~~a first enclosure portion comprising the~~
The electrically powered device of claim 13, further comprising: ; and
a second shell enclosure portion, wherein the first shell and the second shell enclosure
portions form a case adapted to enclose at least a portion of the electrically powered device; and
~~wherein the battery is a thin-film battery manufactured as part of at least the first~~
~~enclosure portion of the case.~~
2. (Currently amended) The case of claim 1 wherein the battery is formed within the first shell portion of the case.
3. (Currently amended) The case of claim 1 wherein the battery is sputtered onto the first shell portion of the case.
4. (Currently amended) The case of claim 1 wherein the first shell portion and the second shell portion form an enclosure having an interior and an exterior surface, wherein the battery is formed having a contour substantially the same as the interior surface of the first shell portion of the case.
5. (Currently amended) The case of claim 4 wherein the battery is formed having a contour substantially the same as the interior surface of the first shell portion and is later bonded to the interior surface of the first shell portion of the case.
6. (Currently amended) The case of claim 5 further comprising a protective cover placed over the battery on the interior surface of the first shell portion of the case.

-
7. (Currently amended) The case of claim 1 ~~wherein the first portion and the second portion form an enclosure having an interior and an exterior surface~~, wherein the battery is formed having a contour substantially the same as the exterior surface of the first shell portion of the case.
8. (Currently amended) The case of claim 7 wherein the battery is first formed having a contour substantially the same as the exterior surface of the first shell portion and is later bonded to the exterior surface of the first shell portion of the case.
9. (Currently amended) The case of claim 7 further comprising a protective cover placed over the battery on the exterior surface of the first shell portion of the case.
10. (Currently amended) The case of claim 1 wherein the first shell portion and the second shell portion are hingedly attached to one another.
11. (Currently amended) The case of claim 1 wherein the first shell portion and the second shell portion are attached by a living hinge.
12. (Currently amended) The case of claim 1 wherein the battery is integrated within the first shell portion of the case, wherein the first shell portion further comprises:
an electrical trace formed on the interior surface of the first shell; and
a site on the interior surface of the first shell adapted to receive an electrically powered component, wherein the battery, the trace and the electrically powered component form at least a portion of a circuit.
13. (Currently amended) An electrically powered device comprising:
a first shell, wherein the first shell forms a portion of an enclosure for the device, the first shell having an interior surface and an exterior surface; and
a battery integrated with the first shell, wherein the battery is formed as one or more layers integral to the first shell.

14. (Currently amended) The electrically powered device of claim 13 further comprising:
a trace formed on the interior surface of the first shell; and
a site on the interior surface of the first shell adapted to receive an electrically powered component, wherein the battery, the trace and the electrically powered component form a portion of a circuit.
15. (Currently amended) The electrically powered device of claim 13 wherein the first shell is a convex curved portion of ~~an~~ the enclosure.
16. (Currently amended) The electrically powered device of claim 13 wherein the battery is formed within the first shell.
17. (Currently amended) The electrically powered device of claim 16 wherein the battery is comprised of a plurality of layers successively deposited on the shell.
18. (Currently amended) The electrically powered device of claim 16 further comprising contacts associated with the battery, ~~wherein the shell has an interior surface and an exterior surface~~, wherein the contacts are positioned near one of the interior surface or exterior surface.
19. (Original) The electrically powered device of claim 18 wherein there are a plurality of contacts associated with the battery, wherein the contacts can be configured to produce a plurality of different battery hook ups.
20. (Currently amended) The electrically powered device of claim 13 wherein the battery is formed on the first shell.
21. (Currently amended) The electrically powered device of claim 20 ~~wherein the shell has an interior surface and an exterior surface~~, wherein the battery is formed on one of the interior surface or exterior surface.

22. (Original) The electrically powered device of claim 20 further comprising a protective layer placed over the battery.

23. (Currently amended) The electrically powered device of claim 20 ~~wherein the shell has an interior surface and an exterior surface~~, wherein the battery is sputtered on ~~one of the interior surface or exterior surface~~.

24. (Original) The electrically powered device of claim 23 further comprising a protective layer placed over the battery.

25. (Original) The electrically powered device of claim 20 further comprising:
a trace; and
a site adapted to receive an electrically powered component, wherein the battery, the trace and the electrically powered component form a portion of a circuit.

26. (Currently amended) The electrically powered device of claim 20 ~~wherein the shell has an interior surface and an exterior surface~~, wherein the battery is formed on the exterior surface of the first shell, said first shell further comprising electrical contacts for the battery which are positioned near the interior surface of the first shell.

27. (Currently amended) The electrically powered device of claim 26 further comprising:
a trace on the interior surface of the first shell; and
a site positioned on the interior surface of the first shell adapted to receive an electrically powered component, wherein the battery, the trace and the electrically powered component form a portion of a circuit.

28. (Currently amended) The electrically powered device of claim 13 further comprising a capacitor integrated within the first shell.

29. (Currently amended) The electrically powered device of claim 20 further comprising a capacitor formed on the first shell.

Claims 30 – 53 (Cancelled)

54. (withdrawn) An integrated combined battery and device shell apparatus comprising:
an outer shell for an electronics device;
a first conductive layer deposited on a first surface area of the shell;
a second conductive layer deposited on a second surface area of the shell; and
a battery comprising a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode or the cathode or both include an intercalation material or a metal or both.

55. (withdrawn) The apparatus according to claim 54, wherein:
the cathode layer comprises a lithium intercalation material deposited on the first conductive layer; and
the electrolyte layer comprises LiPON.

56. (withdrawn) The apparatus according to claim 54, wherein:
the cathode layer comprises lithium cobalt oxide deposited on the first conductive layer;
and
the electrolyte layer comprises LiPON.

57. (withdrawn) The apparatus according to claim 54, wherein:
the electrolyte layer comprises LiPON; and
the anode layer comprises a lithium intercalation material deposited on the electrolyte layer.

58. (withdrawn) The apparatus according to claim 54, wherein:
the outer shell has a curved shape having a convex face and a concave face, and the battery is located on the concave face.
59. (New) An electric-powered device comprising:
first enclosure portion means for enclosing the device, the first enclosure portion means shaped to form an outer surface of the device; and
thin-film battery means manufactured as part of the first enclosure portion means of the case.
60. (New) The device of claim 59, wherein the first enclosure portion means is folded upon itself.
61. (New) The device of claim 59, wherein the first enclosure portion means is helically rolled upon itself.
62. (New) The device of claim 59, wherein the first enclosure portion means is rolled around an electrical motor, the device further comprising:
a shaft operatively coupled to the motor; and
a chuck placed upon the shaft to form a hand-held drill for homeowner use.
63. (New) The device of claim 59, wherein the first enclosure portion means is helically rolled upon itself, the device further comprising:
an LED light electrically coupled to the battery to form a flashlight.
64. (New) The device of claim 13, wherein the first shell is rolled around an electrical motor, the device further comprising:
a shaft operatively coupled to the motor; and
a chuck placed upon the shaft to form a hand-held drill for homeowner use.

65. (New) The device of claim 13, wherein the first shell is helically rolled upon itself, the device further comprising:

an LED light electrically coupled to the battery to form a flashlight.

66. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

a first conductive layer deposited on a first surface area of the first shell;

a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the cathode includes an intercalation material.

67. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

a first conductive layer deposited on a first surface area of the first shell;

a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the cathode includes a metal.

68. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

a first conductive layer deposited on a first surface area of the first shell;

a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer,

the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the cathode includes an intercalation material and a metal.

69. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

- a first conductive layer deposited on a first surface area of the first shell;
- a second conductive layer deposited on a second surface area of the first shell; and
- wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the cathode includes a lithium intercalation material and lithium.

70. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

- a first conductive layer deposited on a first surface area of the first shell;
- a second conductive layer deposited on a second surface area of the first shell; and
- wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes an intercalation material and the cathode includes an intercalation material.

71. (New) The device of claim 13, wherein the first shell forms a plastic outer case for the electronics device, wherein the battery is comprised of a cathode layer; a lithium phosphorus oxynitride electrolyte layer, and an anode layer, and wherein the electrolyte layer is in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes an intercalation material.

72. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

- a first conductive layer deposited on a first surface area of the first shell;
- a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes an intercalation material.

73. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

- a first conductive layer deposited on a first surface area of the first shell;
- a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes a metal.

74. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

- a first conductive layer deposited on a first surface area of the first shell;
- a second conductive layer deposited on a second surface area of the first shell; and

wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes an intercalation material and a metal.

75. (New) The device of claim 13, wherein the first shell forms at least a portion of an outer case for the electronics device, and further comprising:

a first conductive layer deposited on a first surface area of the first shell;
a second conductive layer deposited on a second surface area of the first shell; and
wherein the battery is comprised of a cathode layer; an electrolyte layer, and an anode layer deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, wherein the anode includes a lithium intercalation material and lithium.

76. (New) The device of claim 13, wherein the first shell forms at least one portion of a pacemaker enclosure, the pacemaker further including an energy-receiving device coupled to recharge the battery, and a heart-stimulation lead coupled to receive energy supplied by the battery.

77. (New) The device of claim 76, wherein the energy-receiving device includes an antenna used to receive radio-frequency energy for recharging of the battery.

78. (New) The device of claim 13, wherein the first shell forms at least one portion of a wristwatch enclosure, the watch further including a band attached to the enclosure and operative to strap onto a person's wrist.

79. (New) The device of claim 78, further comprising an energy-receiving device operatively coupled to recharge the battery.

80. (New) The device of claim 78, further comprising a solar cell operatively coupled to recharge the battery, and an LCD within the enclosure.

81. (New) An electrically powered device comprising:
a shell, wherein the shell forms a portion of an enclosure for the device, the shell having an interior surface and an exterior surface; and

a battery integrated with the first shell, wherein the battery is formed as one or more layers integral to the first shell, the layers including:

- a first conductive layer,
- a second conductive layer,
- a cathode layer,
- an electrolyte layer, and

an anode layer, wherein the layers are deposited such that the cathode layer is in electrical contact with the first conductive layer, the anode layer is in electrical contact with the second conductive layer, and the electrolyte layer in contact with and completely separating the anode layer and the cathode layer, and wherein the anode or the cathode or both include an intercalation material or a metal or both.

82. (New) The apparatus according to claim 81, wherein:

- the cathode layer comprises a lithium intercalation material deposited on the first conductive layer; and
- the electrolyte layer comprises LiPON.

83. (New) The apparatus according to claim 82, wherein:

- the outer shell has a curved shape having a convex face and a concave face, and the battery is curved and located on the concave face.